

Amendments to the Claims

This listing of claims will replace all prior listings of claims in the application.

Listing of Claims

1. (Canceled)

2. (Previously Presented) A process according to Claim 11, wherein the ozonizing step is performed at the pH of 5 or lower by an addition of a pH controlling agent.

3. (Previously Presented) A process according to Claim 11, wherein the process further comprises, prior to the step of ozonizing, a step of acidogenesis in which a part of the aerated aqueous suspension in the aeration tank or the separated sludge is subjected to an anaerobic biological treatment to adjust the pH thereof to a value of 5 or lower.

4. (Previously Presented) A process according to Claim 11, wherein the process further comprises a step of heating the aqueous suspension or the sludge to a temperature between 50 and 100°C before or after the ozonizing step.

5. (Previously Presented) A process according to Claim 11, wherein the biosludge in the aeration tank has a VSS/SS ratio maintained at a value of 0.2-0.7 and a MLVSS value maintained of 500-10000 mg/l.

6.-10. (Canceled)

11. (Currently Amended) A process for aerobic biological treatment of an aqueous organic waste ~~in which biosludge is grown and biosludge is lost by autolysis~~ comprising the steps of:

introducing the aqueous organic waste into an aeration tank;

aerating the aqueous organic waste in the aeration tank in the presence of a biosludge comprising aerobic microorganisms to form an aerated aqueous suspension containing excess sludge generated from the aqueous organic waste in which biosludge is grown from the aqueous organic waste and biosludge is lost by autolysis;

withdrawing aerated aqueous suspension from the aeration tank and introducing the withdrawn aerated aqueous suspension into a solid/liquid separation unit;

subjecting the aerated aqueous suspension in the solid/liquid separation unit to solid/liquid separation to form a separated sludge and a separated liquid phase;

discharging the separated liquid phase from the process as treated water;

recycling at least a portion of the separated sludge back to the aeration tank;

ozonizing either a part of aerated aqueous suspension in the aeration tank or a part of the separated sludge to ozonize and convert biosludge contained in the part of aerated aqueous suspension or part of the separated sludge into BOD components, the ozonizing taking place at a pH of 5 or lower; and

recycling either the ozonized part of aerated aqueous suspension or the ozonized part of the separated sludge back to the aeration tank for aerobic biological treatment, wherein the amount of biosludge ozonized and converted into BOD components is greater than the difference between the amount of biosludge grown in the aeration tank and the amount of biosludge lost by autolysis.

12. (Currently Amended) A process for aerobic biological treatment of an aqueous organic waste in which biosludge is grown and biosludge is lost by autolysis comprising the steps of:

introducing the aqueous organic waste into an aeration tank;

aerating the aqueous organic waste in the aeration tank in the presence of a biosludge comprising aerobic microorganisms to form an aerated aqueous suspension containing excess sludge generated from the aqueous organic waste in which biosludge is grown from the aqueous organic waste and biosludge is lost by autolysis;

withdrawing aerated aqueous suspension from the aeration tank and introducing the withdrawn aerated aqueous suspension into a membrane separation unit;

subjecting the aerated aqueous suspension in the membrane separation unit to membrane separation to form a permeated liquid and a concentrated sludge;

discharging the permeated liquid from the process as treated water;

recycling at least a portion of the concentrated sludge back to the aeration tank;

ozonizing either a part of aerated aqueous suspension in the aeration tank or a part of the concentrated sludge to ozonize and convert biosludge contained in the part of aerated aqueous suspension or part of the concentrated sludge into BOD components, the ozonizing taking place at a pH of 5 or lower; and

recycling either the ozonized part of aerated aqueous suspension or the ozonized part of the concentrated sludge back to the aeration tank for aerobic biological treatment, wherein the amount of biosludge ozonized and converted into BOD components is greater than the difference between the amount of biosludge grown in the aeration tank and the amount of biosludge lost by autolysis.

13. (Canceled)

14. (Canceled)

15. (Previously Presented) The process according to Claim 11, wherein aerated aqueous suspension withdrawn from the aeration tank is ozonized.

16. (Previously Presented) The process according to Claim 12, wherein aerated aqueous suspension withdrawn from the aeration tank is ozonized.